Shayan Huda Chowdhury

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EXPERIENCE

Lead Data Analyst, a2i Programme, ICT Ministry / Cabinet Division / UNDP Bangladesh   March 2020 – present

As member of the Bangladesh National COVID-19 Policy Dashboard Committee of the Ministries of Health and IT, developing tools for COVID-19 data collection and modeling its spread to inform actionable policy for lockdowns, public health communications and healthcare decisions. Analyzing data on tests, cases, deaths, hospitalizations, and mobility. Collaborating with the Directorate General of Health Services, Institute of Epidemiology and ICDDR,B with guidance from epidemiologists and data scientists from Harvard, MIT, Columbia and UC Berkeley.

Executive Director & Co-founder, Reach4Help   March 2020 – present

Leading Reach4Help, a tech nonprofit connecting people in need to trusted volunteer help with 500+ volunteers across 38+ countries. Managing a team of engineers, designers, and community organizers to build open-source web tools for nonprofits from AIESEC in Portugal to the COVID-19 Help Hub in Montréal. Developed a need-matching web platform for coordinating food banks, clothing drives and vaccination support for low-income communities hit hard by COVID-19. Developed a global map of 10K+ mutual aid organizations, serving as a single repository of volunteer help through the pandemic, Mexican earthquake, California wildfires, Texas power crisis, Delta variant coronavirus surge in India, etc.

Software Developer, Migrant Nation Foundation, The Netherlands   December 2019 – June 2020

Developed a pioneering "Right to Work" e-Commerce marketplace for Rohingya refugees with UNDP, UNHCR and WFP in Bangladesh to enable them to produce and sell products to consumers worldwide. Interfaced with various multi-channel e-commerce and digital freelancing work platforms such as Amazon and Etsy. To uphold decent work practices, built an app currently being used in the camps to automate calculating hourly wages by scanning refugees' UNHCR ID cards.

Research Intern, Frank Lab: Nobel Laureate Joachim Frank, Columbia University, New York, NY   September 2018 – November 2019

Created the highest resolution 3D reconstruction of 40S eukaryotic ribosome subunit to help understand the mechanism of protein synthesis, towards finding cures for many viruses and cancer. Final project was enhancing a suite of bioinformatics machine learning tools by automating generation of ground truth electron microscope images to optimize a tedious manual process and increase accuracy of particle detection.

Team Leader, Google Mentorship Program, Google, New York, NY   October 2018 – June 2019

Led a Stuyvesant HS team working on machine learning to understand and emulate human emotions from voice intonations using RNNs and GANs to develop Digital Personal Assistants for administrative use, medical applications, speech disabilities, among others.

Research Intern, New York Genome Center and Weill Cornell Medical College, New York, NY   June 2017 – February 2019

Selected by Stand Up to Cancer Program for internship to study genetic evolution of cancer to determine differences between cancerous and non-cancerous cells. Authored a research paper for Regeneron STS. Contributed analysis to papers submitted to the *Nature* journal.

Intern, Herbert Irving Cancer Center, Columbia University College of Physicians and Surgeons, New York, NY   June 2016 – June 2018

As member of cancer demography research team, developed awareness videos on chemoprevention to prevent breast cancer in multi-ethnic women. Supported team with data analysis using relational databases. Trained on legal and confidentiality issues of Human Subjects Research. Contributed to the paper "Usability testing of a web-based decision aid for breast cancer risk assessment among multi-ethnic women."

PROGRAMMING LANGUAGES: Python (adv.), R (adv.), JavaScript/TypeScript (adv.), MatLab, Java, C#, C++, Dart, SQL

RESEARCH PAPERS

- Mahmud, A. S., **Chowdhury, S.**, Sojib, K. H., Chowdhury, A., Quader, M. T., Paul, S., ... & Buckee, C. O. (2021). Participatory syndromic surveillance as a tool for tracking COVID-19 in Bangladesh. Epidemics, 35, 100462.
- Chadwick, F., Clark, J., **Chowdhury, S.**, … & Sania, A. (2021). Combining Rapid Antigen Testing and Syndromic Surveillance Improves Sensitivity and Specificity of COVID-19 Detection: A Community-Based Prospective Diagnostic Study. Preprint for Lancet Global Health.
- Ferguson E. A., Brum, E., Chowdhury, A., **Chowdhury, S.**, Kundegorski, M., Mahmud, A. S., … & Hampson, K. (2021). Modelling to inform the COVID-19 response in Bangladesh. Preprint for Lancet Global Health.
- **Chowdhury, S.** (2018). Characterizing Noise in Whole Genome Cell-Free DNA Analysis. New York Genome Center, Regeneron STS

HONORS AND AWARDS

- Global Shapers, World Economic Forum   2021
- Gates Scholarship   Finalist 2019
- AP Scholar with Distinction   Awardee 2019
- Bezos Scholars Program   Finalist 2018
- MIT INSPIRE: "Differences in Short-term Memory Capacities in Alzheimer's Patients with Different Demographics."   Semi-finalist 2018
- New York State Science and Technology Entry Program Conference, Albany, NY   3rd Prize 2015, 2nd Prize 2016, 1st Prize 2017
- National Latin Examination, National Junior Classical League   Silver 2016, Gold 2017, Silver 2018, Silver 2019

EDUCATION Stuyvesant High School, New York, NY   Graduation: June 2019

Scholarships: Daniel Bergstein Memorial Scholarship 2019, Elizabeth Piper Scholarship 2018
City University of New York: College Biology (BIOL 106 – 2nd Semester), Principles of Microeconomics (ECO 10250 – Macaulay Honors)   2019
Columbia University: Sci of Psychology (INSPN0160-61), Contemporary Civilization (COCI CC1101) (Freedom & Citizenship Prog)   2015-2019
Harvard University Summer School: Foundation of Neuroscience (BIOS-50)   2018

SKILLS AND INTERESTS

- *Clubs and Societies:* President of Research Club, National Latin Honor Society, Stuyvesant Alumni Mentoring Program
- *Languages/Skills:* English & Bangla (fluent), Latin & Spanish (int.), Music Composition, Spartans Wrestling Team, Taekwondo (Red belt)